

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:
a main body of the image forming apparatus;
a wireless LAN module that is provided inside
5 a rear surface of the main body of the image forming
apparatus;
an antenna that is provided on the rear surface of
the main body of the image forming apparatus; and
a cable that connects the wireless LAN module and
10 the antenna with a shortest distance.

2. The image forming apparatus according to
claim 1, wherein the wireless LAN module is provided on
a control board that is disposed inside the rear
surface of the main body of the image forming
15 apparatus.

3. The image forming apparatus according to
claim 1, wherein the antenna comprises a main antenna
and a sub-antenna.

4. The image forming apparatus according to
20 claim 1, wherein the antenna comprises a dual-band
antenna.

5. An image forming apparatus with an automatic
document feeder, comprising:

a wireless LAN module that is provided inside
25 a rear surface of a main body of the image forming
apparatus; and
an uppermost part of an antenna that is connected

to the wireless LAN module and is provided on the rear surface of the main body of the image forming apparatus, the uppermost part of the antenna being located at a position higher than a predetermined 5 position relative to an uppermost part of the automatic document feeder.

6. The image forming apparatus according to claim 5, wherein the uppermost part of the antenna is located at a position higher than a position that is 10 lower by 1 cm than the uppermost part of the automatic document feeder.

7. An image forming apparatus with an automatic document feeder, comprising:

15 a wireless LAN module that is provided inside a rear surface of a main body of the image forming apparatus;

16 ~~an upper antenna that is connected to the wireless LAN module and is provided on the rear surface of the main body of the image forming apparatus, the main antenna being located at a position where optimal radiation characteristics are obtained in consideration of the presence of the automatic document feeder that is an obstacle to a front side of the image forming apparatus; and~~

20 ~~an upper antenna that is connected to the wireless LAN module and is provided on the rear surface of the main body of the image forming apparatus, the main antenna being located at a position where optimal radiation characteristics are obtained in consideration of the presence of the automatic document feeder that is an obstacle to a front side of the image forming apparatus; and~~

25 ~~an upper antenna that is connected to the wireless LAN module and is provided on the rear surface of the main body of the image forming apparatus.~~

a sub-antenna that is connected to the wireless LAN module and is provided on the rear surface of the main body of the image forming apparatus.

8. The image forming apparatus according to
claim 7, wherein an uppermost part of the main antenna
is provided on that part of the rear surface of the
image forming apparatus, which corresponds to a right
5 side of the front surface of the image forming
apparatus, at a position that is lower by 1 cm than
an uppermost part of the automatic document feeder.

9. The image forming apparatus according to
claim 7, wherein the sub-antenna is provided at such
10 a position as to compensate a degraded portion of
radiation characteristics of the main antenna.

10. The image forming apparatus according to
claim 7, wherein an uppermost part of the sub-antenna
is provided on that part of the rear surface of the
15 image forming apparatus, which corresponds to a left
side of the front surface of the image forming
apparatus, at a position that is lower by 1 cm than
an uppermost part of the automatic document feeder.

11. The image forming apparatus according to
20 claim 7, further comprising an antenna for Bluetooth,
which is disposed between the main antenna and the
sub-antenna, with a predetermined distance from the
main antenna and a predetermined distance from the
sub-antenna.

25 12. The image forming apparatus according to
claim 11, wherein the antenna for Bluetooth is disposed
with a distance of 200 mm or more from the main antenna

and with a distance of 200 mm or more from the sub-antenna.